

Intrinsically safe dual output low frequency sensor

787T-500-IS

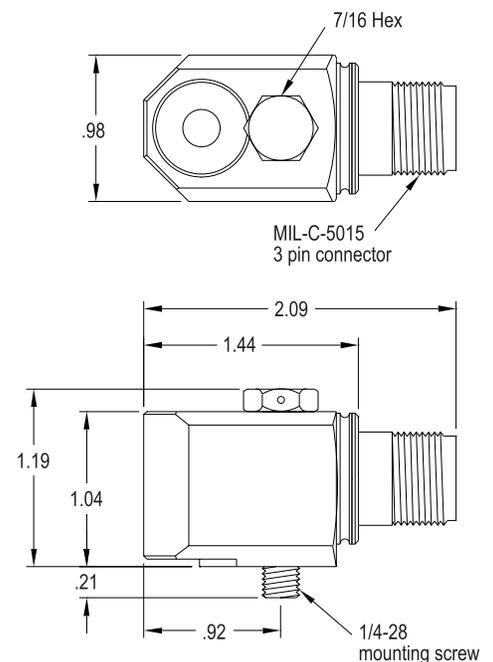
SPECIFICATIONS

Sensitivity, $\pm 5\%$, 25°C	500 mV/g
Acceleration range, VDC > 25 V	10 g peak
Amplitude nonlinearity	1%
Frequency response:	$\pm 10\%$ 0.5 - 5,000 Hz ± 3 dB 0.2 - 10,000 Hz
Resonance frequency	22 kHz
Transverse sensitivity, max	5% of axial
Temperature response:	-25°C -10% +120°C +10%
Temperature sensor:	
Output sensitivity	10 mV/°C
Measurement range	2° to 120°C
Power requirement:	
Voltage source ¹	18 - 30 VDC
Current regulating diode ^{1,2}	2 - 10 mA
Electrical noise, equiv. g, nominal:	
Broadband 2.5 Hz to 25 kHz	250 μ g
Spectral 10 Hz	2.5 μ g/ $\sqrt{\text{Hz}}$
100 Hz	1.5 μ g/ $\sqrt{\text{Hz}}$
1,000 Hz	1.5 μ g/ $\sqrt{\text{Hz}}$
Output impedance, max	300 Ω
Bias output voltage, nominal	12 VDC
Grounding	case isolated, internally shielded
Temperature range	-50° to +120°C
Vibration limit	500 g peak
Shock limit	5,000 g peak
Electromagnetic sensitivity, equiv. g, max	70 μ g/gauss
Sealing	hermetic
Base strain sensitivity, max	0.0002 g/ μ strain
Sensing element design	PZT ceramic / shear
Weight	145 grams
Case material	316L stainless steel
Mounting	1/4-28 captive screw w/ 0.046" diameter safety wire hole
Output connector	3 pin, MIL-C-5015 style
Mating connector	3 socket, MIL-C-5015 style (R6G)
Recommended cabling	3 conductor, shielded



Key features

- Accelerometer with internal temperature sensor
- Manufactured in ISO 9001 facility



Connections	
Function	Connector pin
accelerometer power/signal	A
accelerometer and temp sensor common	B
temp sensor signal	C
ground / case	shell

Notes: ¹ To minimize the possibility of signal distortion during high vibration signals, 24 to 28 VDC powering is recommended. The higher level constant current source should be used when driving long cables.

² A maximum current of 6 mA is recommended for operating temperatures in excess of 100°C.

Accessories supplied: 1/4-28 captive screw; calibration data (level 2)

Certifications

	Class I, Div 1 Groups A, B, C, D Class II, Div 1 Groups E, F, G Class III Class I Zone 0 AEx/Ex ia IIC T4 Ta = -50°C to 120°C	II 1 G Ex ia IIC T4 Ga Ta = -50°C to 120°C	

Must be installed per document 12880. For application in explosive atmospheres caused by gases, vapours or mists and where the use of apparatus of category 1G is required, electrostatic charges on the cable and non-metallic parts of the enclosure shall be avoided. The ambient temperature range for these applications is -40°C to +80°C.

Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.